

# Sodium: the facts

Americans consume too much sodium. High sodium consumption raises blood pressure, and high blood pressure is a major risk factor for heart disease and stroke.<sup>1</sup> Heart disease and stroke are the nation's first and third leading causes of death.<sup>2</sup>

## Salt and high blood pressure

- Research strongly shows a dose-dependent relationship between consuming too much salt and raised levels of blood pressure.<sup>1</sup>
- When salt intake is reduced, blood pressure begins decreasing within weeks on average.<sup>3</sup>
- Populations who consume diets low in salt do not experience the increase in blood pressure with age that is seen in most Western countries.<sup>1,4</sup>

## Is it salt or is it sodium?

- Sodium chloride is the chemical name for salt.<sup>1</sup>
- The words salt and sodium are not exactly the same, yet these words are often used in place of each other. For example, the Nutrition Facts Panel uses "sodium," whereas the front of the package may say "low salt."<sup>5</sup>
- Ninety percent of the sodium we consume is in the form of salt.<sup>1</sup>

## Sodium consumption and sodium in our food supply

- We all need a small amount of sodium to keep our bodies working properly.<sup>1</sup>
- The *2015–2020 Dietary Guidelines for Americans* recommend that Americans consume less than 2,300 milligrams (mg) of sodium each day as part of a healthy eating pattern.<sup>6</sup>

- The average daily sodium intake for Americans age 2 years and older is more than 3,400 mg.<sup>7</sup>
- Americans are consuming substantially more sodium. Since the 1970s, the amount of sodium in our food has increased, and we are eating more food each day than in the past.<sup>7,8</sup>
- The majority of the sodium consumed is from processed and restaurant foods; only a small portion is used in cooking or added at the table.<sup>9</sup>
- Decreasing personal sodium intake can be hard, even for motivated persons.
- Sodium content can vary significantly within food categories. For example, a regular slice of frozen cheese pizza can range from 450 mg to 1200 mg,<sup>6</sup> and some brands of breakfast sausage links have twice the sodium content of other brands.<sup>10</sup>
- Nutrition labeling and package messaging are easily misunderstood by consumers.<sup>11</sup>
- Sodium information is not readily available for restaurant foods and can be hard for the consumer to estimate.<sup>12</sup> For example, consumers might be surprised to find that the restaurant salad they are consuming may contain more than 900 mg of sodium—and could only find this information on the company's website.

## Reducing sodium, reducing cardiovascular disease burden

- Even if a person does not have high blood pressure, the lower one's blood pressure in general, the lower the risk of heart disease and stroke.<sup>4</sup>
- If manufacturers gradually reduced the amount of sodium in processed and prepared foods, public consumption of sodium could be reduced to safer levels with little or no behavior changes needed on the part of the individual consumer.
- Sodium intake from processed and restaurant foods contributes to high rates of high blood pressure, heart attack, and stroke. Because nearly 400,000 deaths each year are attributed to high blood pressure, decreasing sodium intake could prevent thousands of deaths annually.<sup>13</sup>

## Other potential benefits of reduced sodium consumption that need further research<sup>1</sup>

- Reduced risk of gastro-esophageal cancer.
- Reduced left ventricular mass.
- Preserved bone mass.



## References

- <sup>1</sup> Institute of Medicine. Dietary reference intakes for water, potassium, sodium chloride, and sulfate. Washington, DC: National Academies Press; 2004.
- <sup>2</sup> Heron MP, Hoyert DL, Murphy SL, Xu JQ, Kochanek KD, Tejada-Vera B. Deaths: Final data for 2006. National vital statistics reports; Vol 57 No 14. Hyattsville, MD: National Center for Health Statistics; 2009.
- <sup>3</sup> He FJ, MacGregor GA. Effect of longer-term modest salt reduction on blood pressure. *Cochrane Database Syst Rev*. 2004;(3):CD004937.
- <sup>4</sup> Chobanian AV, Bakris GL, Black HR, Cushman WC, Green LA, Izzo JL Jr, et al. The seventh report of the Joint National Committee on Prevention, Detection, Evaluation, and Treatment of High Blood Pressure. *Hypertension*. 2003;42:1206–52.
- <sup>5</sup> World Health Organization. Reducing salt intake in populations: Report of a WHO forum and technical meeting. Geneva, Switzerland: World Health Organization; 2007. Available from <http://www.who.int/dietphysicalactivity/publications/en>.
- <sup>6</sup> U.S. Department of Health and Human Services and U.S. Department of Agriculture. *2015–2020 Dietary Guidelines for Americans*. 8th Edition. December 2015. Available at <http://health.gov/dietaryguidelines/2015/guidelines>.
- <sup>7</sup> U.S. Department of Health and Human Services and U.S. Department of Agriculture. What We Eat in America. NHANES 2011–2012. Available at [http://www.ars.usda.gov/SP2UserFiles/Place/80400530/pdf/1112/tables\\_1-40\\_2011-2012.pdf](http://www.ars.usda.gov/SP2UserFiles/Place/80400530/pdf/1112/tables_1-40_2011-2012.pdf).
- <sup>8</sup> Briefel R, Johnson C. Secular trends in dietary intake in the United States. *Annu.Rev Nutr*. 2004;24:401–31.
- <sup>9</sup> Mattes RD, Donnelly D. Relative contributions of dietary sodium sources. *J Am Coll Nutr*. 1991;10:383–93.
- <sup>10</sup> Center for Science in the Public Interest. Salt. Available from <http://cspi.cc/new/200701031.html>.
- <sup>11</sup> Rothman RL, Housam R, Weiss H, Davis D, Gregory R, Gebretsadik T, Shintain A, Elasy TA. Patient understanding of food labels: The role of literacy and numeracy. *Am J Prev Med*. 2006;31:391–8.
- <sup>12</sup> Burton S, Creyer E, Kees J, Huggins K. Attacking the obesity epidemic: The potential health benefits of providing nutrition information in restaurants. *Am J Public Health*. 2006;96:1669–75.
- <sup>13</sup> Danaei G, Ding EL, Mozaffarian D, Taylor B, Rehm J, Murray CJ, et al. The preventable causes of death in the United States: Comparative risk assessment of dietary, lifestyle, and metabolic risk factors. *PLoS Med*. 2009;6(4):e1000058. doi: 10.1371/journal.pmed.1000058.

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